

What is claimed is:

1. An authentication device comprising:

a detection section that detects variance in friction between a finger and a surface of the detection section when
5 relative movement between the surface of the detection section and the finger occurs; and

an authentication section that authenticates a person based on time-series data representing variance in friction detected at the detection section.

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2. The authentication device according to claim 1, wherein the detection section comprises a protruded part whose tip touches a finger when relative movement between a surface of the protruded part and the finger occurs.

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3. The authentication device according to claim 1, wherein the authentication section comprises:

a template storing section that stores template data to be compared with time-series data representing variance in
20 friction detected at the detection section;

a similarity calculation section that calculates similarity between time-series data representing variance in friction detected at the detection section and the template data stored in the template storing section; and

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a similarity determination section that determines whether the similarity calculated in the similarity calculation section is greater than certain similarity or not.

4. The authentication device according to claim 3, wherein
the similarity calculation section calculates similarity
between the time-series data and the template data by using
5 DP matching technique.

5. The authentication device according to claim 3,
wherein the authentication section comprises:
a data quality determination section that determines
10 whether time-series data representing variance in friction
detected at the detection section is appropriate for
authentication or not,
wherein the similarity calculation section calculates
similarity between the time-series data determined
15 appropriate for authentication at the data quality
determination section and the template data.

6. An authentication system comprising:
a detection device that detects variance in friction
20 between a finger and a surface of the detection device when
relative movement between the surface of the detection device
and the finger occurs, and
an authentication device that authenticates a person
based on time-series data representing variance in friction
25 detected at the detection device.

7. The authentication system according to claim 6, wherein
the detection device comprises a protruded part whose tip

touches a finger when relative movement between a surface of the protruded part and the finger occurs.

8. The authentication system according to claim 6,

5 wherein the detection device compresses time-series data obtained by detecting variance in friction between a finger and the detection device to send out the compressed data to the authentication device, and

wherein the authentication device decompresses the
10 compressed data sent from the detection device to recover the time-series data and performs authentication based on the recovered time-series data.

9. A sensor comprising a detection section that detects
15 variance in friction between a finger and a surface of the detection section when relative movement between the surface of the detection section and the finger occurs.

10. The sensor according to claim 9, comprising:

20 a supporting section that supports a finger placed on the sensor,

wherein the detection section is located to touch the finger supported by the supporting section.

25 11. The sensor according to claim 9, wherein the detection device comprises a protruded part whose tip touches a finger when relative movement between a surface of the protruded part and the finger occurs.

12. The sensor according to claim 9, wherein the detection section is composed of piezoelectronic element.